

**TITLE**

**Elastomeric Balloon Support Fabric**

**ABSTRACT**

5 Balloon catheter covers are elastic fabric structures of interconnected yarns, the structure having a high degree of stretch and recovery in the circumferential direction with little change in dimension in the longitudinal direction during multiple pressurization cycles over full range of inflation and deflation of the balloon catheter. The covers have longitudinal  
10 yarns positioned at about zero degrees to the balloon axis and reversibly-stretchable, circumferential yarns positioned at a high angle  $\emptyset$  to the axis.

A method for making the balloon catheter covers allowing nearly orthogonal placement of circumferential and longitudinal yarns involves triaxial braiding a minimum number of elastomeric braid yarns with  
15 multiple axial yarns to provide maximum convergence angle (approaching 90 degrees).